

Appl. No. : 10/772,650  
Amdt. Dated: January 3, 2008  
Reply to Office Action of October 17, 2007

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**AMENDMENTS**

**To the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**What is claimed is:**

1. (Currently Amended) A method for balancing the load of a wireless local area network, the wireless local area network comprising a plurality of access points forming a service set, the method comprising the steps of:

sending a probe-request frame for association with said service set from a station to said plurality of access points;

selecting an access point with the lowest load;

sending a probe-response frame from the access point with the lowest load to the station;

and

constructing an association between the station and the access point with the lowest load for balancing the load of said plurality of access points.

2. (Original) The method for balancing the load of a wireless local area network of Claim 1, wherein the step of selecting an access point with the lowest load access point includes the substeps of:

selecting an access point as a master access point and assigning the other access points as slave access points;

sending a load collection packet from the master access point to the slave access points;

returning load index packets with load information from the slave access points; and

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performing a load comparison procedure to select an access point with the lowest load according to the load index packets.

3. (Original) The method for balancing the load of a wireless local area network of Claim 2, wherein the load comparison procedure comprises the substeps of:

- collecting the load index packets sent from the other access points by each access point;
- comparing its own load by each access point with the loads of the 5 other access points;
- and
- turning on a probe-response function of the access point with the lowest load, and turning off the probe-response function of the other access points.

4. (Original) The method for balancing the load of a wireless local area network of Claim 2, wherein the master access point is the access point booted first.

5. (Original) The method for balancing the load of a wireless local area network of Claim 2, further comprising a group reconstruction procedure for selecting the access point with the lowest load as the master access point.

6. (Original) The method for balancing the load of a wireless local area network of Claim 5, wherein the group reconstruction procedure comprises the substeps of:

- sending group reconstruction packets with load information from said 20 plurality of access points;
- comparing its own load by each access point with the loads of the other access points; and

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setting the access point with the lowest load as the master access point.

7. (Original) The method for balancing the load of a wireless local area network of Claim 1, wherein the plurality of access points have the same basic service set identifier.

8. (Original) The method for balancing the load of a wireless local area network of Claim 1, wherein the access point with the lowest load replies a probe-response frame to the station and the other access points do not reply.

9. (New) A wireless local area network system comprising:  
a plurality of access points forming a service set; and  
at least one station configured to send to said plurality of access points a probe-request frame for association with said service set,

wherein the system is configured to select an access point with the lowest load and to send a probe-response from the access point with the lowest load to said station and wherein the system is further configured to construct an association between the station and the access point with the lowest load.